METRIC THREAD BOLTS

Denomination: **METRIC THREAD BOLTS**

Codes: : **T084, T963, T965, T985, D931, D933, D933I, D6921 D912, D603, D608, D934, D934I, D985, D985I, D1587, D6923, D315, D125, D125I, D127, D9021, D9021I, D6798A**

DIN 84

DIN 963

DIN 965

DIN 7985

DIN 931

DIN 933

DIN 933 (A2)

DIN 6921

DIN 912

DIN 603

DIN 608

DIN 934

DIN 934 (A2)

DIN 985

DIN 985 (A2)

DIN 1587

DIN 6923

TU-MA

DIN 125

DIN 125 (A2)

DIN 127

DIN 9021

DIN 9021 (A2)

DIN 6798

CHARACTERISTICS

- Bolts for mechanical fixings.
- Metric thread.
- Requires pre-drilled threading, or the use of a metric nut.
- Variety of sizes, heads and lengths: flexibility in installation.
- Zinc-plated coating and Stainless Steel.

APPLICATIONS

- Bolts for mechanical fixings.

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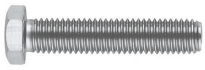
1. RANGE

ITEM	CODE	STANDARD	PHOTO	HEAD	RECESS	MATERIAL
1	**T084**	DIN 84		Cylinder	Slot	Steel class 4.8 UNE EN ISO 898-1. Coating: zinc-plated ≥ 5 µm s/ISO 4042
2	**T963**	DIN 963		Countersunk	Slot	Steel class 4.8 UNE EN ISO 898-1. Coating: zinc-plated ≥ 5 µm s/ISO 4042
3	**T965**	DIN 965		Countersunk	Ph	Steel class 4.8 UNE EN ISO 898-1. Coating: zinc-plated ≥ 5 µm s/ISO 4042
4	**T985**	DIN 7985		Crowned	Ph	Steel class 4.8 UNE EN ISO 898-1. Coating: zinc-plated ≥ 5 µm s/ISO 4042
5	**D931**	DIN 931		Hexagonal	Hexagonal	Steel class 8.8 UNE EN ISO 898-1. Coating: zinc-plated ≥ 5 µm s/ISO 4042
6	**D933**	DIN 933		Hexagon	Hexagon	Steel class 8.8 UNE EN ISO 898-1. Coating: zinc-plated ≥ 5 µm s/ISO 4042
7	**D933I**	DIN 933 (A2)		Hexagonal	Hexagonal	Stainless Steel A2-70 (AISI 304)
8	**D6921**	DIN 6921				Steel class 8.8 UNE EN ISO 898-1. Coating: zinc-plated ≥ 5 µm s/ISO 4042
9	**D912**	DIN 912		Cylinder	Allen	Steel class 8.8 UNE EN ISO 898-1. Coating: zinc-plated ≥ 5 µm s/ISO 4042
10	**D603**	DIN 603		Rivet with square neck	Tamperproof	Steel class 4.8 UNE EN ISO 898-1. Coating: zinc-plated ≥ 5 µm s/ISO 4042
11	**D608**	DIN 608		Countersunk	Cylindrical	Steel class 8.8 UNE EN ISO 898-1. Coating: yellow passivated ≥ 5 µm s/ISO 4042
12	**D934**	DIN 934		Hexagon		Steel hardness > 140 HV. Coating: zinc-plated: zinc-plated ≥ 5 µm s/ISO 4042

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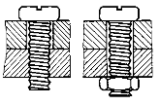
ITEM	CODE	STANDARD	PHOTO	HEAD	RECESS	MATERIAL
13	**D934I**	DIN 934 (A2)		Hexagonal		Stainless Steel A2-70 (AISI 304)
14	**D985**	DIN 985		Hexagon		Steel hardness > 140 HV. Coating: zinc-plated: zinc-plated ≥ 5 µm s/ISO 4042
15	**D985I**	DIN 985 (A2)		Hexagonal		Stainless Steel A2-70 (AISI 304)
16	**D1587**	DIN 1587		Hexagonal		Carbon Steel Coating: zinc-plated: zinc-plated ≥ 5 µm s/ISO 4042
17	**D6923**	DIN 6923		Hexagonal		Carbon Steel Coating: zinc-plated: zinc-plated ≥ 5 µm s/ISO 4042
18	**TU-MA**	Equivalent DIN 315		--		Carbon Steel Coating: zinc-plated: zinc-plated ≥ 5 µm s/ISO 4042
19	**D125**	DIN 125		--		Steel hardness > 140 HV. Coating: zinc-plated: zinc-plated ≥ 5 µm s/ISO 4042
20	**D125I**	DIN 125 (A2)		--		Stainless Steel A2-70 (AISI 304)
21	**D127**	DIN 127		--		Steel class 6 UNE EN 20898-2. Coating: zinc-plated ≥ 5 µm s/ISO 4042
22	**D9021**	DIN 9021		--		Steel class 6 UNE EN 20898-2. Coating: zinc-plated ≥ 5 µm s/ISO 4042
23	**D9021I**	DIN 9021 (A2)		--		Stainless Steel A2-70 (AISI 304)
24	**D6798A**	DIN 6798		--		Carbon Steel Coating: zinc-plated: zinc-plated ≥ 5 µm s/ISO 4042

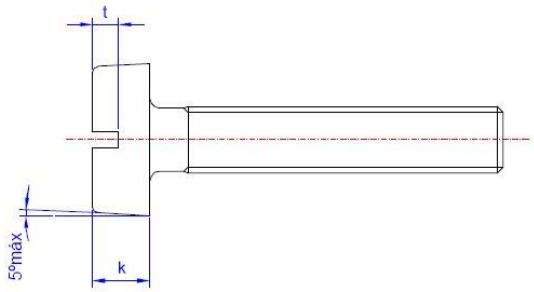
2. CHARACTERISTICS

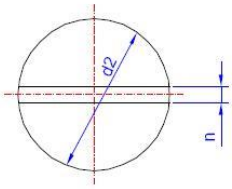
2.1 DIN-84 — Slotted bolt – cylindrical head

Properties		
		
Steel	Zinc-plated coating	Plate fixings

Properties		
Slot	Cylindrical head	Metric

SIZE		M3	M4	M5	M6
Ød2: head diameter	[mm]	5.5	7	8.5	10
k: head thickness	[mm]	2.0	2.6	3.3	3.9
n: slot width	[mm]	1.0	1.50	1.50	1.9
t: slot depth	[mm]	1.15	1.5	1.8	2.2





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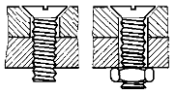
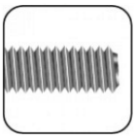
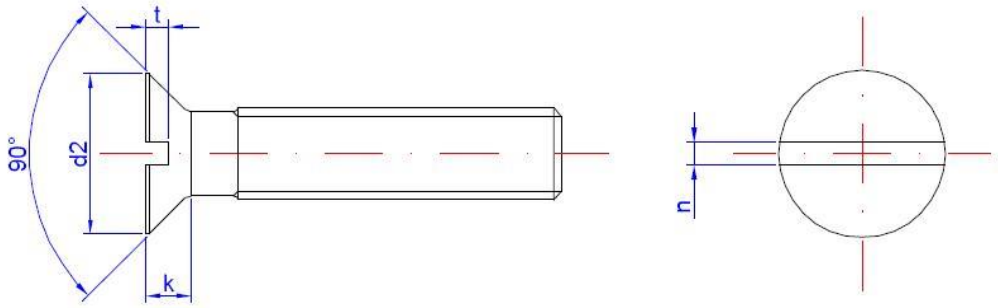
Reference: **FT MET-en** | Date: **03/12/20** | Revision: **8** | Page: **5 of 23**

2.2 DIN-963 — Slotted bolt – countersunk head

Properties		
		
Steel	Zinc-plated coating	Plate fixings

Properties		
		
Slot	Countersunk Head	Metric

SIZE		M4	M5	M6	M8
Ød2: head diameter	[mm]	7.5	9.2	11	14.5
k: head thickness	[mm]	2.2	2.5	3	4
n: slot width	[mm]	1.5	1.5	1.9	2.3
t: slot depth	[mm]	1.1	1.3	1.6	2.1



METRIC THREAD BOLTS

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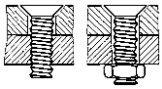
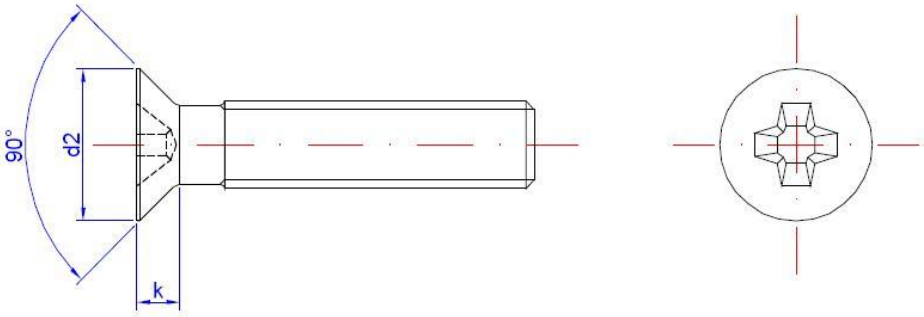
Codes: : **T084, T963, T965, T985, D931, D933, D933I, D6921 D912, D603, D608, D934, D934I, D985, D985I, D1587, D6923, D315, D125, D125I, D127, D9021, D9021I, D6798A**

2.3 DIN-965 — Bolt – countersunk head - Ph socket

Properties		
		
Steel	Zinc-plated coating	Plate fixings

Properties		
Ph	Countersunk head	Metric

SIZE		M3	M4	M5	M6
Ød2: head diameter	[mm]	5.6	7.5	9.2	11.0
k: head thickness	[mm]	1.65	2.2	2.5	3.0
Ph socket		1	2	2	3
Drill bit code		PUPHC01 PUPHL01	PUPHC02 PUPHL002	PUPHC02 PUPHL02	PUPHC03 PUPHL03



METRIC THREAD BOLTS

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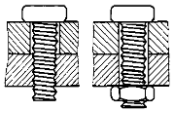
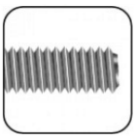
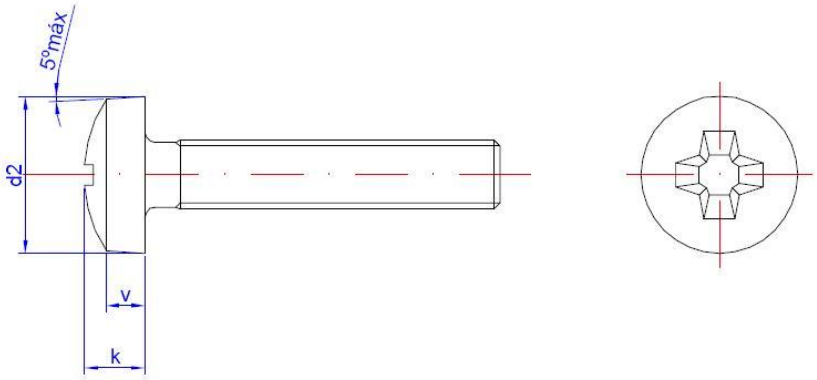
2.4 DIN-7985 — Dome head bolt - Ph socket

Properties		
		
Steel	Zinc-plated coating	Plate fixings

Properties		
		
Ph	Dome head	Metric

SIZE		M3	M4	M5	M6
Ød2: head diameter	[mm]	6	8	10	12
k: Head thickness	[mm]	2.4	3.1	3.8	4.6
v	[mm]	1.6	2.0	2.5	3.0
Ph socket		1	2	2	3
Drill bit code		PUPHC01 PUPHL01	PUPHC02 PUPHL002	PUPHC02 PUPHL02	PUPHC03 PUPHL03



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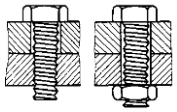
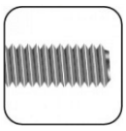
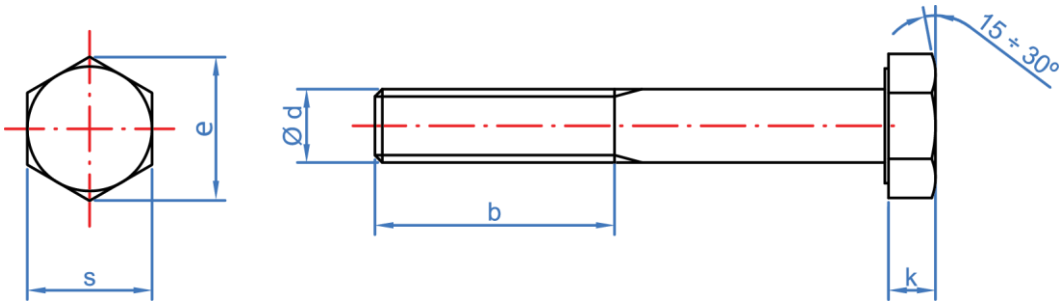
2.5 DIN-931

Metric thread bolt – hexagonal head

Properties		
		
Steel	Zinc-plated coating	Plate fixings

Properties		
		
Hexagonal	Hexagonal head	Metric

SIZE		M6	M8	M10	M12	M14	M16	M18	M20
s: distance between faces	[mm]	10	13	17	19	22	24	27	30
k: head thickness	[mm]	4	5,3	6,4	7,5	8,8	10	11,5	12,5
e: distance between apexes	[mm]	10,89	14,20	18,72	20,88	23,91	26,17	29,56	32,95
b(min): thread length l ≤ 120 mm	[mm]	18	22	26	30	34	38	42	46
b(min): thread length l > 120 mm	[mm]	--	28	32	36	40	44	48	52
Torque wrench		10	13	17	19	22	24	27	30



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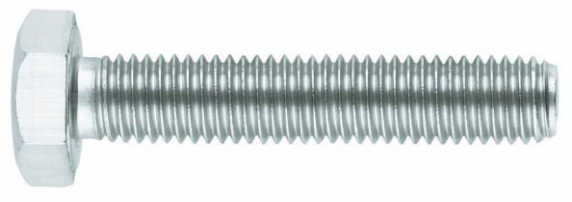
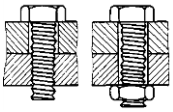
Reference: **FT MET-en** | Date: **03/12/20** | Revision: **8** | Page: **9 of 23**

2.6 DIN-933

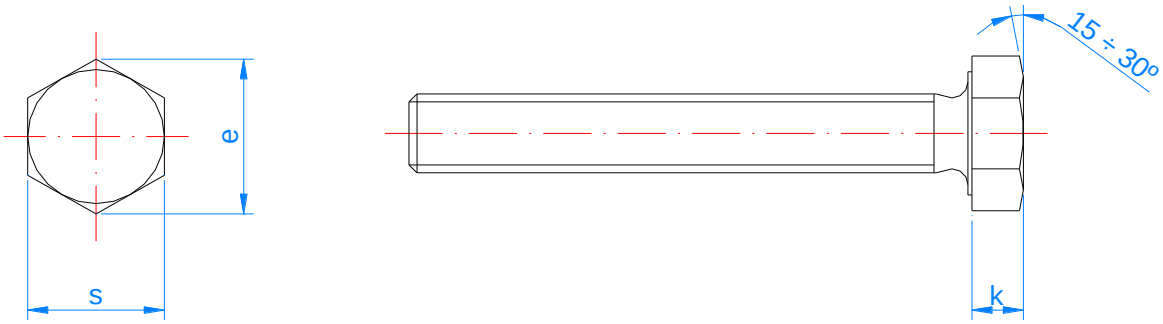
Metric thread bolt – hexagonal head



Properties		
		
Steel	Zinc-plated coating	Plate fixings

Properties		
Hexagonal	Hexagonal head	Metric

SIZE		M4	M5	M6	M8	M10	M12	M14	M16	M18	M20
s: distance between faces	[mm]	7	8	10	13	17	19	22	24	27	30
k: head thickness	[mm]	3	3,5	4	5,3	6,4	7,5	8,8	10	11,5	12,5
e: distance between apexes	[mm]	7,50	8,63	10,89	14,20	18,72	20,88	23,91	26,17	29,56	32,95
Torque wrench		7	8	10	13	17	19	22	24	27	30



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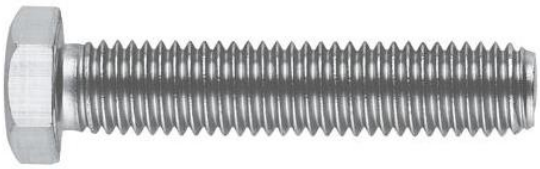
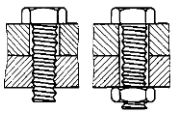
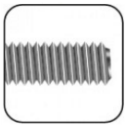
2.7 DIN-933 A2

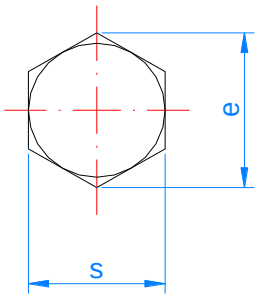
Stainless steel metric thread bolt – hexagonal head

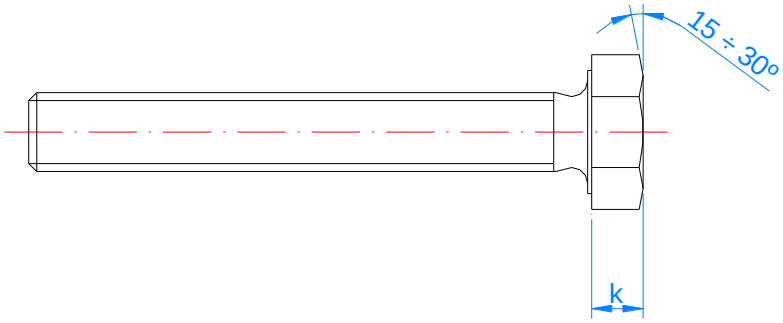


Properties		
		
Steel	Stainless Steel A2 (AISI 304)	Plate fixings

Properties		
		
Hexagonal	Hexagonal head	Metric

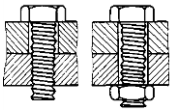
SIZE		M4	M5	M6	M8	M10	M12	M14	M16	M18
s: distance between faces	[mm]	7	8	10	13	17	19	22	24	27
k: head thickness	[mm]	3	3,5	4	5,3	6,4	7,5	8,8	10	11,5
e: distance between apexes	[mm]	7,50	8,63	10,89	14,20	18,72	20,88	23,91	26,17	29,56
Torque wrench		7	8	10	13	17	19	22	24	27

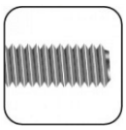




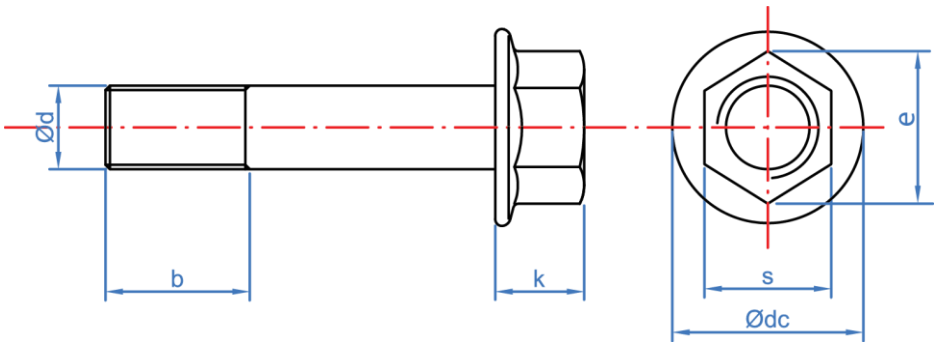
METRIC THREAD BOLTS

2.8 DIN-6921 — Metric thread bolt – hexagonal head with washer

Properties		
		
Steel	Zinc-plated coating	Plate fixings

Properties		
		
Hexagonal	Hexagonal head	Metric

SIZE		M5	M6	M8	M10	M12
s: distance between faces	[mm]	8	10	13	17	19
k: head thickness	[mm]	5,4	6,6	8,10	9,2	11,5
e: distance between apexes	[mm]	8,71	10,95	14,26	16,50	17,62
Ødc: washer diameter	[mm]	11,8	14,2	18,0	22,3	26,6
b(min): thread length	[mm]	Full / 16 min	Full / 18 min	Full / 22 min	Full / 26 min	Full / 30 min
Torque wrench		8	10	13	17	19

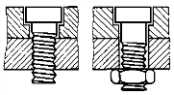


METRIC THREAD BOLTS

Denomination: **METRIC THREAD BOLTS**

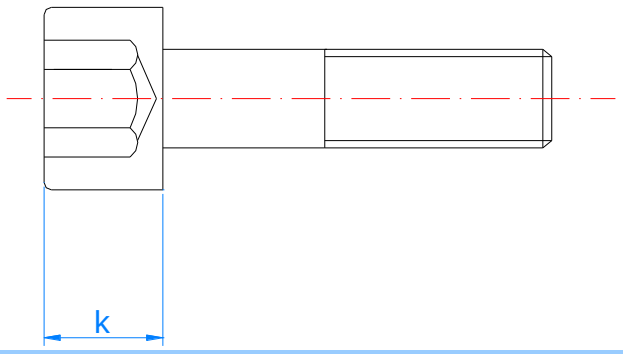
Codes: : **T084, T963, T965, T985, D931, D933, D933I, D6921 D912, D603, D608, D934, D934I, D985, D985I, D1587, D6923, D315, D125, D125I, D127, D9021, D9021I, D6798A**

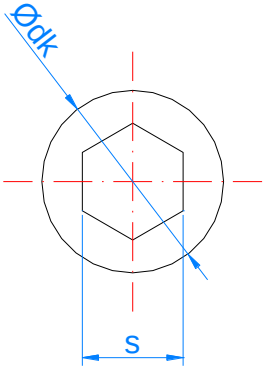
2.9 DIN-912 — Allen bolt

Properties		
		
Steel	Zinc-plated coating	Plate fixings

Properties		
Allen	Cylindrical head	Metric

SIZE		M4	M5	M6	M8	M10	M12
s: distance between faces	[mm]	7	8,5	10	13	16	18
k: head thickness	[mm]	3	4	5	6	8	10
e: distance between apexes	[mm]	4	5	6	8	10	12
Torque wrench		Allen 3	Allen 4	Allen 5	Allen 6	Allen 8	Allen 10





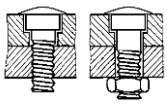
METRIC THREAD BOLTS

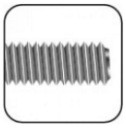
Denomination: **METRIC THREAD BOLTS**

Codes: : **T084, T963, T965, T985, D931, D933, D933I, D6921 D912, D603, D608, D934, D934I, D985, D985I, D1587, D6923, D315, D125, D125I, D127, D9021, D9021I, D6798A**

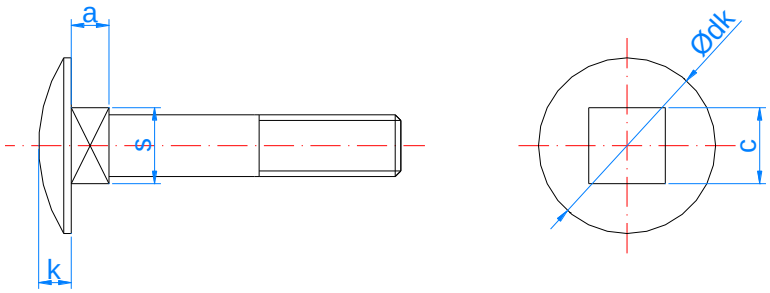
2.10 DIN-603

DIN-603 bolt and DIN-934 nut

Properties		
		
Steel	Zinc-plated coating	Plate fixings

Properties	
	
Rivet head	Metric

SIZE		M5	M6	M8	M10	M12
Ødk: head diameter	[mm]	13	16	20	24	30
k: head thickness	[mm]	3	3,5	4,5	5	6,5
a: square thickness	[mm]	3,5	4	5	6	8
s	[mm]	5	6,2	7,8	9,85	11,6
c	[mm]	5	6	8	10	12



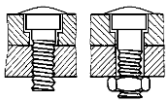
METRIC THREAD BOLTS

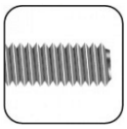
Denomination: **METRIC THREAD BOLTS**

Codes: : **T084, T963, T965, T985, D931, D933, D933I, D6921 D912, D603, D608, D934, D934I, D985, D985I, D1587, D6923, D315, D125, D125I, D127, D9021, D9021I, D6798A**

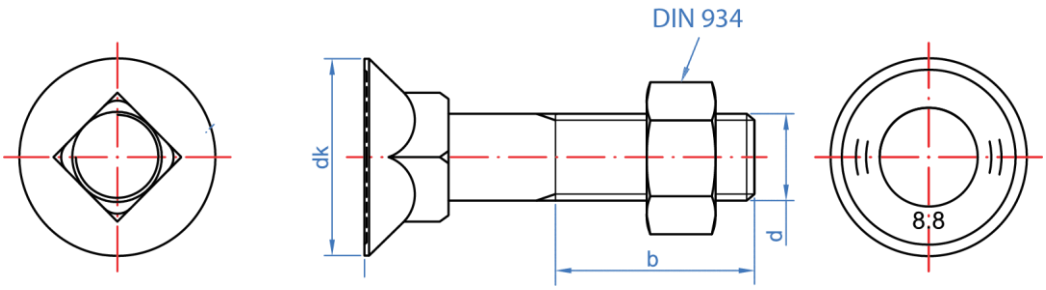
2.11 DIN-608

DIN-608 Bolt and DIN-934 nut

Properties		
		
Steel	Yellow passivated	Plate fixings

Properties	
	
Countersunk head	Metric

SIZE		M10	M10	M12
Ødk: head diameter	[mm]	19,5	21,5	23,5
b: thread length	[mm]	25	27	28,5
d: metric	[mm]	10	11	12



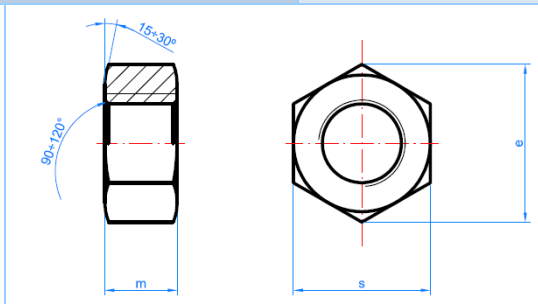
METRIC THREAD BOLTS

Denomination: **METRIC THREAD BOLTS**

Codes: : **T084, T963, T965, T985, D931, D933, D933I, D6921 D912, D603, D608, D934, D934I, D985, D985I, D1587, D6923, D315, D125, D125I, D127, D9021, D9021I, D6798A**

Reference: **FT MET-en** | Date: **03/12/20** | Revision: **8** | Page: **15 of 23**

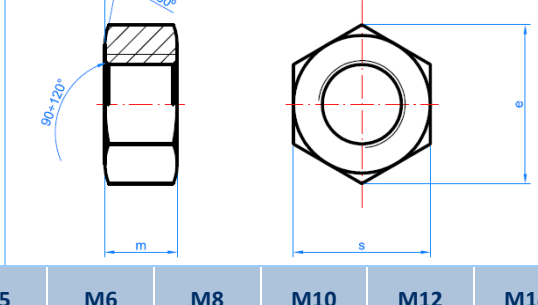
2.11 DIN-934 — Hexagonal nut

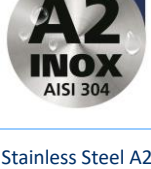


Properties	
Steel	Zinc-plated coating

M	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30	M33	M36
s	5,5	7	8	10	13	17	19	22	24	27	30	32	36	41	46	50	55
e	6,0	7,7	8,8	11,1	14,4	18,9	21,1	24,5	26,8	29,6	32,9	35,0	39,6	45,2	50,9	55,4	60,8
m	2,4	3,2	4	5	6,5	8	10	11	13	15	16	18	19	22	24	26	29
Wrench	5,5	7	8	10	13	17	19	22	24	27	30	32	36	41	46	50	55

2.12 DIN-934 A2 — Stainless Steel A2 hexagonal nut



Properties	
	
Steel	Stainless Steel A2 (AISI 304)

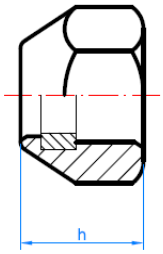
M	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24
s	7	8	10	13	17	19	22	24	27	30	32	36
e	7,7	8,8	11,1	14,4	18,9	21,1	24,5	26,8	29,6	32,9	35,0	39,6
m	3,2	4	5	6,5	8	10	11	13	15	16	18	19
Wrench	7	8	10	13	17	19	22	24	27	30	32	36

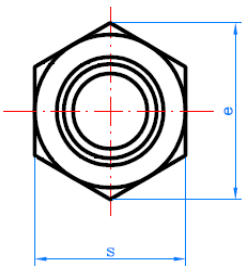
METRIC THREAD BOLTS

Denomination: **METRIC THREAD BOLTS**

Codes: : **T084, T963, T965, T985, D931, D933, D933I, D6921 D912, D603, D608, D934, D934I, D985, D985I, D1587, D6923, D315, D125, D125I, D127, D9021, D9021I, D6798A**

2.13 DIN-985 — Self-locking nut

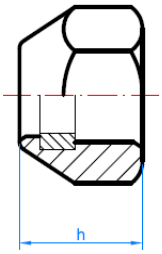


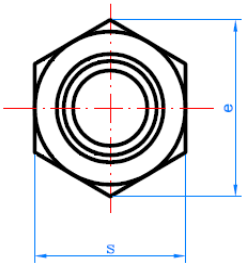


Properties	
Steel	Zinc-plated coating

M	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30
s	5,5	7	8	10	13	17	19	22	24	27	30	32	36	41	46
e	6,0	7,7	8,8	11,1	14,4	18,9	21,1	24,5	26,8	29,6	32,9	35,0	38,6	45,2	50,9
h	4	5	5	6	8	10	12	14	16	18,5	20	22	24	27	30
Wrench	5,5	7	8	10	13	17	19	22	24	27	30	32	36	41	46

2.14 DIN-985 A2 — Stainless Steel A2 self-locking nut





Properties	
Steel	Stainless Steel A2 (AISI 304)

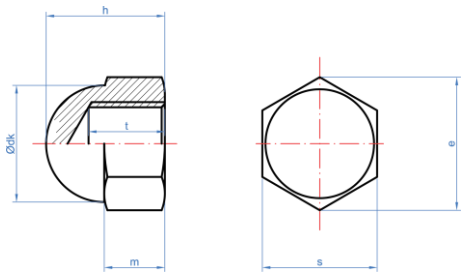
M	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24
s	7	8	10	13	17	19	22	24	27	30	32	36
e	7,7	8,8	11,1	14,4	18,9	21,1	24,5	26,8	29,6	32,9	35,0	38,6
h	5	5	6	8	10	12	14	16	18,5	20	22	24
Wrench	7	8	10	13	17	19	22	24	27	30	32	36

METRIC THREAD BOLTS

Denomination: **METRIC THREAD BOLTS**

Codes: : **T084, T963, T965, T985, D931, D933, D933I, D6921 D912, D603, D608, D934, D934I, D985, D985I, D1587, D6923, D315, D125, D125I, D127, D9021, D9021I, D6798A**

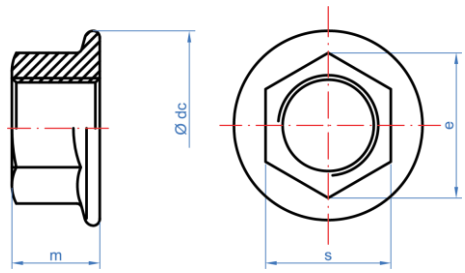
2.15 DIN-1587 Cup nut



Properties	
Steel	Zinc-plated coating

M	M4	M5	M6	M8	M10	M12	M14	M16
s	7	8	10	13	17	19	22	24
e	7,7	8,8	11,1	14,4	18,9	21,1	24,5	26,8
h	8	10	12	15	18	22	25	28
m	3	4	5	6,5	8	10	11	13
t	5,5	7,5	8	11	13	16	18	21
Ødk	6,5	7,5	9,5	12,5	16	18	21	23
Wrench	7	8	10	13	17	19	22	24

2.16 DIN-6923 Hexagonal flange nut with serration



Properties	
Steel	Zinc-plated coating

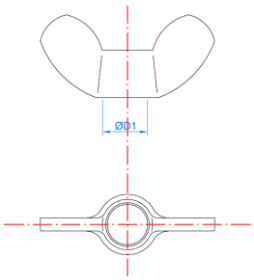
M	M4	M5	M6	M8	M10	M12	M14	M16
s	7	8	10	13	15	18	21	24
e	7,7	8,8	11,1	14,4	18,9	21,1	24,5	26,8
m	4,5	5	6	8	10	12	14	16
ØdC	10	11,8	14,2	17,9	21,8	26	29,9	34,5
Wrench	7	8	10	13	17	19	22	24

METRIC THREAD BOLTS

Denomination: **METRIC THREAD BOLTS**

Codes: : **T084, T963, T965, T985, D931, D933, D933I, D6921 D912, D603, D608, D934, D934I, D985, D985I, D1587, D6923, D315, D125, D125I, D127, D9021, D9021I, D6798A**

2.17 TU-MA — Wing nut



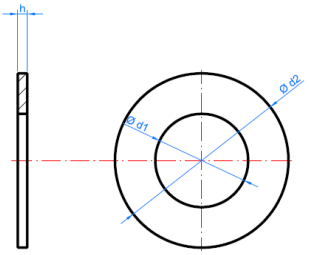
Properties

Steel

Zinc-plated coating

M	M3	M4	M5	M6	M8	M10	M12	M14	M16
ØD1: interior diameter	M3	M4	M5	M6	M8	M10	M12	M14	M16

2.18 DIN-125 — Flat washer



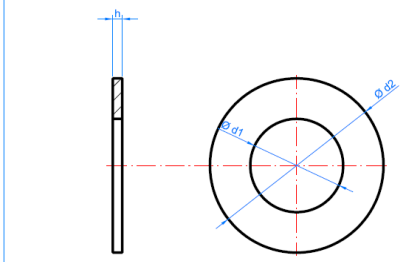
Properties

Steel

Zinc-plated coating

M	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30	M33	M36
Ød1: interior diameter	3,3	4,3	5,3	6,4	8,4	10,5	13,0	15,0	17,0	19,0	21,0	23,0	25,0	28,0	31,0	34,0	37,0
Ød2: exterior diameter	7	9	10	12	16	20	24	28	30	34	37	39	44	50	56	60	66
h: thickness	0,8	0,8	1	1,6	1,6	2	2,5	2,5	3	3	3	3	4	4	4	5	5

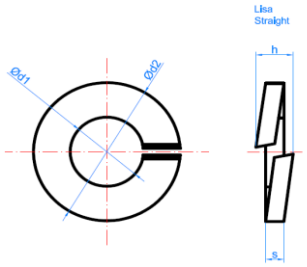
2.19 DIN-125 A2 — Stainless Steel A2 flat washer



Properties	
Steel	Stainless Steel A2 (AISI 304)

M	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24
Ød1: interior diameter	4,3	5,3	6,4	8,4	10,5	13,0	15,0	17,0	19,0	21,0	23,0	25,0
Ød2: exterior diameter	9	10	12	16	20	24	28	30	34	37	39	44
h: thickness	0,8	1	1,6	1,6	2	2,5	2,5	3	3	3	3	4

2.20 DIN-127 — Grower spring washer



Properties	
Steel	Zinc-plated coating

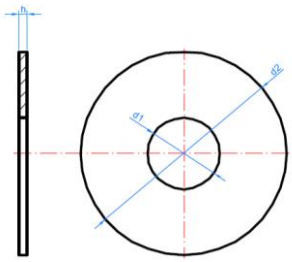
M	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30	M36
Ød1: interior diameter	3,1	4,1	5,1	6,1	8,1	10,2	12,2	14,2	16,2	18,2	20,2	22,5	24,5	27,5	30,5	36,5
Ød2: exterior diameter	6,2	7,6	9,2	11,8	14,8	18,1	21,1	24,1	27,4	29,4	33,6	35,9	40	43	48,2	58,2
h: smooth width	1,8	2	2,6	3,3	4,3	4,8	5,4	6,5	7,6	7,7	8,7	8,7	10,9	10,9	13,1	13,1
s: thickness	0,8	0,9	1,2	1,6	2	2,2	2,5	3	3,5	3,5	4	4	5	5	6	6

METRIC THREAD BOLTS

Denomination: **METRIC THREAD BOLTS**

Codes: : **T084, T963, T965, T985, D931, D933, D933I, D6921 D912, D603, D608, D934, D934I, D985, D985I, D1587, D6923, D315, D125, D125I, D127, D9021, D9021I, D6798A**

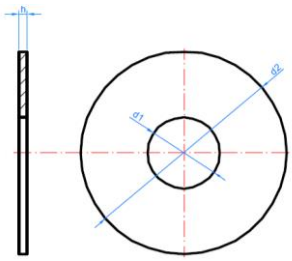
2.21 DIN-9021 — Wide flat washer



Properties	
Steel	Zinc-plated coating

M	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24
Ød1: interior diameter	3,2	4,3	5,3	6,4	8,4	10,5	13,0	15,0	17,0	20,0	22,0	24,0	26,0
Ød2: exterior diameter	9	12	15	18	24	30	37	44	50	56	60	66	72
h: thickness	0,8	1	1,2	1,6	2	2,5	3	3	3	4	4	5	5

2.22 DIN-9021 — Stainless steel wide flat washer



Properties	
Steel	Stainless Steel A2 (AISI 304)

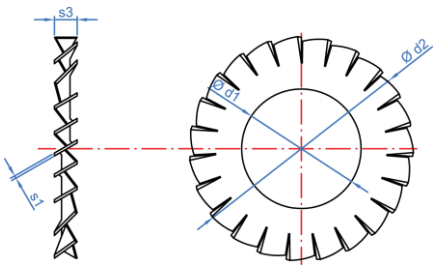
M	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24
Ød1: interior diameter	4,3	5,3	6,4	8,4	10,5	13,0	15,0	17,0	20,0	22,0	24,0	26,0
Ød2: exterior diameter	12	15	18	24	30	37	44	50	56	60	66	72
h: thickness	1	1,2	1,6	2	2,5	3	3	3	4	4	5	5

METRIC THREAD BOLTS

Denomination: **METRIC THREAD BOLTS**

Codes: : **T084, T963, T965, T985, D931, D933, D933I, D6921 D912, D603, D608, D934, D934I, D985, D985I, D1587, D6923, D315, D125, D125I, D127, D9021, D9021I, D6798A**

2.23 DIN-6798 — Serrated lock washer external teeth



Properties	
Steel	Stainless Steel A2 (AISI 304)

M	M3	M4	M5	M6	M8	M10	M12	M14	M16
Ød1: interior diameter	3,2	4,3	5,3	6,4	8,4	10,5	13	15	17
Ød2: exterior diameter	6	8	10	11	15	18	20,5	24	26
s1: thickness	0,4	0,5	0,6	0,7	0,8	0,9	1	1	1,2
s3: width	~3*s1								

3. TORQUE FOR BOLTS

For steel bolts and nuts the standard UNE 17-108-81 establishes specific parameters for correct installation.

This standard is aimed to indicate the torque value needed in order to install, with dynamometric tools that don't produce any vibrations nor impacts, the standard Steel bolt range, on rigid supports and only demanded by axial with constant value.

For joints between zinc plated materials, the coefficient of friction established by this standard is μ=0,14. Torque moments for each size are specified in the table below.

TORQUE [da N·m] (con μ=0,14)

ITEM \ SIZE	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20
T084	0,063	0,14	0,29	0,49	1,2	2,4	4,1	6,5	10	14	19,5
T963											
T965											
T985											
D603											
D931	0,12	0,27	0,54	0,93	2,2	4,5	7,7	12,5	19	27	38
D933											
D6921											
D912											
D933 (A2)*	0,16	0,38	0,78	1,30	2,6	4,5	7,7	--	15,6	--	--

* These values are an apporximation and always depend on the nut and bolt having the proper lubrication.

4. RESISTANCES

The standard ISO-898-1 “Mechanical properties of fasteners made of carbon steel and alloy steel” establishes the values for minimum ultimate tensile loads.

Acording to table 6 of the mentioned standard the values shown below correspond to the previous bolts of the datasheet.

The shear values are the same as 50% of the tensile values.

MINIMUM ULTIMATE TENSILE LOAD [kN] ($A_{s,nom}$ x $R_{m,min}$)

ITEM \ SIZE	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20
T084	2,11	3,69	5,96	8,44	15,40	24,40	35,40	48,30	65,90	80,60	103,00
T963											
T965											
T985											
D603											
D608	4,02	7,02	11,35	16,1	29,2	46,4	67,4	92,00	125,00	159,00	203,00
D931											
D933											
D6921											
D912											
D933 (A2)	3,52	6,15	9,94	14,07	20,23	25,62	40,60	59,01	80,50	109,90	134,40

MINIMUM ULTIMATE SHEAR LOAD [kN] ($A_{s,nom}$ x $R_{m,min}$ x 0,5)

ITEM \ SIZE	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20
T084	1,06	1,85	2,98	4,22	7,70	12,20	17,70	24,15	32,95	40,30	51,50
T963											
T965											
T985											
D603											
D608	2,01	3,51	5,68	8,05	14,60	23,20	33,70	46,00	62,50	79,50	101,50
D931											
D933											
D6921											
D912											
D933 (A2)	1,76	3,07	4,97	7,04	10,12	12,81	20,30	29,51	40,25	54,95	67,20